SQL Project:- Music Store Analysis

**Easy Questions:-**

Q1) Who is the senior most employee based on job title?

Solution:-

SELECT \* FROM employee

ORDER BY levels desc

LIMIT 1

Q2) Which countries have the most invoices?

Solution:-

SELECT COUNT(\*) AS c, billing\_country FROM invoice

GROUP BY billing\_country

ORDER BY c desc

Q3) What are top 3 values of total invoice?

Solution:-

SELECT total FROM invoice

ORDER BY total desc

LIMIT 3

Q4) Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money.

Write a query that returns one city that has the highest sum of invoice totals.

Return both the city name & sum of all invoice totals

Solution:-

SELECT SUM(total) AS invoice\_total, billing\_city FROM invoice

GROUP BY billing\_city

ORDER BY invoice\_total desc

Q5) Who is the best customer? The customer who has spent the most money will be declared the best customer. Write a query that returns the person who has spent the most money.

Solution:-

SELECT customer.customer\_id, customer.first\_name, customer.last\_name, SUM(invoice.total) AS total

FROM customer

JOIN invoice ON customer.customer\_id = invoice.customer\_id

GROUP BY customer.customer\_id

ORDER BY total desc

limit 1

**Moderate Questions:-**

Q1) Write query to return the email, first name, last name, & Genre of all Rock Music listeners.

Return your list ordered alphabetically by email starting with A.

Solution:-

#Method 1-

SELECT DISTINCT email, first\_name, last\_name

FROM customer

JOIN invoice ON customer.customer\_id = invoice.customer\_id

JOIN invoice\_line ON invoice.invoice\_id = invoice\_line.invoice\_id

WHERE track\_id IN(

SELECT track\_id FROM track

JOIN genre ON track.genre\_id = genre.genre\_id

WHERE genre.name LIKE 'Rock'

)

ORDER BY email

#Method 2-

SELECT DISTINCT email, first\_name, last\_name

FROM customer

JOIN invoice ON invoice.customer\_id = customer.customer\_id

JOIN invoice\_line ON invoice\_line.invoice\_id = invoice.invoice\_id

JOIN track ON track.track\_id = invoice\_line.track\_id

JOIN genre ON genre.genre\_id = track.genre\_id

WHERE genre.name LIKE 'Rock'

ORDER BY email

Q2) Let's invite the artists who have written the most rock music in our dataset.

Write a query that returns the Artist name and total track count of the top 10 rock bands.

Solution:-

SELECT artist.name, COUNT(artist.artist\_id) AS number\_of\_songs

FROM track

JOIN album ON album.album\_id = track.album\_id

JOIN artist ON artist.artist\_id = album.artist\_id

JOIN genre ON genre.genre\_id = track.genre\_id

WHERE genre.name LIKE 'Rock'

GROUP BY artist.name

ORDER BY number\_of\_songs desc

LIMIT 10

Q3) Return all the track names that have a song length longer than the average song length. Return the Name and Milliseconds for each track. Order by the song length with the longest songs listed first.

Solution:-

SELECT name, milliseconds FROM track

WHERE milliseconds > (

SELECT AVG(milliseconds) AS avg\_track\_length

FROM track)

ORDER BY milliseconds desc

**Advance Questions:-**

Q1) Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent

Solution:-

WITH best\_selling\_artist AS (

SELECT artist.artist\_id AS artist\_id, artist.name AS artist\_name,

SUM(invoice\_line.unit\_price \* invoice\_line.quantity) AS total\_sales

FROM invoice\_line

JOIN track ON invoice\_line.track\_id = track.track\_id

JOIN album ON track.album\_id = album.album\_id

JOIN artist ON artist.artist\_id = album.artist\_id

GROUP BY artist.artist\_id

ORDER BY total\_sales desc

LIMIT 1

)

SELECT c.customer\_id, c.first\_name, c.last\_name, bsa.artist\_name,

SUM(il.unit\_price \* il.quantity) AS amount\_spent

FROM invoice AS i

JOIN invoice\_line AS il ON il.invoice\_id = i.invoice\_id

JOIN customer AS c ON i.customer\_id = c.customer\_id

JOIN track AS t ON il.track\_id = t.track\_id

JOIN album AS alb ON alb.album\_id = t.album\_id

JOIN best\_selling\_artist AS bsa ON bsa.artist\_id = alb.artist\_id

GROUP BY c.customer\_id, c.first\_name, c.last\_name, bsa.artist\_name

ORDER BY amount\_spent desc

Q2) We want to find out the most popular music Genre for each country. We determine the most popular genre as the genre with the highest amount of purchases. Write a query that returns each country along with the top Genre. For countries where the maximum number of purchases is shared return all Genres.

Solution:-

WITH popular\_genre AS

(

SELECT COUNT(invoice\_line.quantity) AS purchases, customer.country, genre.genre\_id, genre.name,

ROW\_NUMBER() OVER(PARTITION BY customer.country ORDER BY COUNT(invoice\_line.quantity) DESC) AS RowNo

FROM invoice\_line

JOIN invoice ON invoice.invoice\_id = invoice\_line.invoice\_id

JOIN customer ON customer.customer\_id = invoice.customer\_id

JOIN track ON track.track\_id = invoice\_line.track\_id

JOIN genre ON genre.genre\_id = track.genre\_id

GROUP BY customer.country, genre.genre\_id, genre.name

ORDER BY customer.country, COUNT(invoice\_line.quantity) DESC

)

SELECT \* FROM popular\_genre WHERE RowNo <= 1

Q3) Write a query that determines the customer that has spent the most on music for each country.

Write a query that returns the country along with the top customer and how much they spent.

For countries where the top amount spent is shared, provide all customers who spent this amount.

Solution:-

WITH popular\_genre AS

(

SELECT COUNT(invoice\_line.quantity) AS purchases, customer.country, genre.genre\_id, genre.name,

ROW\_NUMBER() OVER(PARTITION BY customer.country ORDER BY COUNT(invoice\_line.quantity) DESC) AS RowNo

FROM invoice\_line

JOIN invoice ON invoice.invoice\_id = invoice\_line.invoice\_id

JOIN customer ON customer.customer\_id = invoice.customer\_id

JOIN track ON track.track\_id = invoice\_line.track\_id

JOIN genre ON genre.genre\_id = track.genre\_id

GROUP BY customer.country, genre.genre\_id, genre.name

ORDER BY customer.country, COUNT(invoice\_line.quantity) DESC

)

SELECT \* FROM popular\_genre WHERE RowNo <= 1